

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF: Andrew L. Pearlman  
SERIAL NO: Not assigned GROUP ART UNIT: Not assigned  
FILED: Herewith EXAMINER: Not assigned  
CUSTOMER NO.: 27162  
FOR: Tissue Characterization Based on Impedance Images and on  
Impedance Measurements  
ATTY/DKT NO.: 701030-16

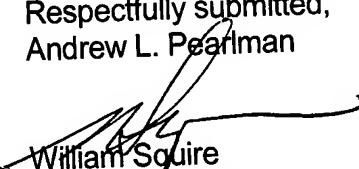
MS Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

SIR:

Pursuant to 37 C.F.R. §1.56(a), Applicant(s) hereby cite(s) the enclosed documents listed on the attached copy of Form PTO-1449 which were cited in the parent applications. Consideration of these references is respectfully requested and made of record in this application. No copies of the references are required.

The Commissioner is authorized to charge payment of any fees associated with this communication or credit any overpayment to Deposit Account No. 03-0678.

Respectfully submitted,  
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INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				ATTY DOCKET NO. 080/03737	SERIAL NO. US Continuation of 09/995,217		
				Andrew L. PEARLMAN FILING Herewith		GROUP To be assigned	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
1		4,510,939	16 Apr '85	BRENNAN, H. S. et al.			
2		5,070,862	10 Dec '91	BERLANT, S. R.			
3		4,820,973	Apr '98	ALVAREZ			
4		6,122,544	19 Sep '00	ORGAN			
5		4,763,660	16 Aug '88	KROLL et al.			
6		5,295,483	22 Mar '94	NOWACKI et al.			
7		4,896,673	30 Jan '90	ROSE et al.			
8		5,099,846	31 Mar '92	HARDY			
9		4,082,087	4 Apr '78	HOWSON			
10		4,763,660	16 Aug '88	KROLL et al.			
11		5,045,249	3 Sep '91	JIN et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES      NO
12		DE 42 25 112	9 Dec '93	GERMANY			
13		EP 0 050 353	19 Oct '81	EUROPE			
14		GB 2 138 148	17 Oct '84	ENGLAND			
15		FR 2 655 835	21 Jun '91	FRANCE			
16		GB 2 276 326	28 Sep '94	ENGLAND			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	17	MASUDA et al.; "Topographical Map of Innervation Zones within Single Motor Units Measured with a Grid Surface Electrode"; August 1988; pp. 623-628; IEEE Transactions on Biomedical Engineering; Vol. 35; No. 8; XP000003699; New York, US					
	18	MONSTER et al.; "A System for the Rapid Acquisition of Surface Potential Maps of Human Skeletal Muscle Motor Units;" February 2, 1980; pp. 110-112; IEEE Transactions on Biomedical Engineering; Vol. 27; No. 2; XP002114215; New York, US					
EXAMINER				DATE CONSIDERED			

1000

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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
19	4,387,721	14 Jun '83	ENJOJI			
20	5,247,938	28 Sep '93	SILVERSTEIN et al.			
21	4,537,203	27 Aug '85	MACHIDA			
22	4,805,621	21 Feb '89	HEINZE et al.			
23	4,823,797	25 Apr '89	HEINZE et al.			
24	5,282,840	1 Feb '94	HUDRLIK			
25	5,353,802	11 Oct '94	OLLMAR			
26	5,454,377	3 Oct '95	DZWONCZYK et al.			
27	5,063,937	12 Nov '91	EZENWA et al.			
28	4,291,708	29 Sep '81	FREI et al.			
29	4,458,694	10 Jul '84	SOLLISH et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	NO
30	WO 94/20012	15 Sep '94	PCT				
31	EP 0 000 759	21 Feb '79	EUROPE				
32	WO 91/13584	19 Sep '91	PCT				
33	EP 0 190 043	6 Aug '86	EUROPE				
34	WO 96/12439	2 May '96	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

35	RIU et al.; "In Vivo Static Imaging for the Reactive Parts in Electrical Impedance Tomography Using Multifrequency Techniques;" October 1992; pp. 1706-1707; Proceedings of the Annual International Conference of the Engineering in Medicine and Biology Society; Vol. 5; No. 14; XP000514393; US
36	CESPEDES et al.; "Elastography: Elastic Imaging Using Ultrasound with Application to Muscle and Breast In Vivo;" April 1993; pp. 73-88; Ultrasonic Imaging; Vol. 15; No. 2; XP000383142; Orlando, US

EXAMINER

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37		4,539,640	3 Sep '85	FRY et al.			
38		4,617,939	21 Oct '86	BROWN et al.			
39		4,819,658	11 Apr '89	KOLODNER			
40		5,143,079	1 Sep '92	FREI et al.			
41		5,178,147	12 Jan '93	OPHIR et al.			
42		4,493,039	8 Jan '85	GREGORY, W. D.			
43		5,272,624	21 Dec '93	CISSE, D. C. et al.			
44		6,157,697	5 Dec '00	MERTELMEIER, T. et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES      NO
45		GB 2 273 987	6 Jul '94	ENGLAND			
46		WO 93/23112	25 Nov '93	PCT			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
	47	EYUBOGLU et al.; "In Vivo Imaging of Cardiac Related Impedance Changes;" March 1989; pp. 39-45; IEEE Engineering in Medicine and Biology; Vol. 8, No. 1; XP000002279; New York, US					
	48	RECORD et al.; "Multifrequency Electrical Impedance Tomography;" July 1992; pp. 47-50; Clinical Physics and Physiological Measurement, Supplement A; Vol. 13; XP000431598; York, GB					
EXAMINER				DATE CONSIDERED			
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>							

III. MBRP 800: EMISSIONS TESTS

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INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		Docket Number (Optional) 080/03737	Application Number US Continuation 109/995,317
		Applicant(s) Andrew L. PEARLMAN	Filing Date Herewith
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
EXAMINER INITIAL			
49	Zhilin Huang, et al.; "Bioimpedance Measurements: Theory, Experiment and Application;" November 1987; pp. 1416-1427; Proceedings of the Ninth Annual Conference of the IEEE Engineering in Medicine and Biology Society; Vol. 3; XP00001534		
50	PIPERNO, C. et al.; "Breast Cancer Screening by Impedance Measurements;" 1990; pp. 111-117; <i>Frontiers Med. Biol.</i> ; Vol. 2; plus two attached pages "Mammoscan: A Promising New Technology for Breast Screening and Diagnosis;" and "Mammoscan Breast Impedance System"		
51	ESSELLE, et al.; "Capacitive Sensors for In-Vivo Measurements of the Dielectric Properties of Biological Materials;" March 1988; pp. 101-105; <i>IEEE Transactions on Instrumentation &amp; Measurement</i> ; Vol. 37; No. 1		
52	GERSING, H.; "Messung der Elektrischen Impedanz von Organen-Apparaturen-Ausrüstung für Forschung und Klinische Anwendung;" 1991; pp. 6-11; <i>Biomed. Technik</i> 36; (including abstract in English)		
53	VRANA, J. et al.; "Mesure de L'Impedance des Tissus Hepatiques Transformés par des Processus Lésionnels;" 1992; pp. 165-168; <i>Ann. Gastroentérool. Hepatol.</i> ; Vol. 28; No. 4; (including abstract in English)		
54	RAJSHEKHAR, V.; "Continuous Impedance Monitoring During CT-Guided Stereotactic Surgery: Relative Value in Cystic and Solid Lesions;" 1992; pp. 439-444; <i>British Journal of Neurosurgery</i> (1992); Vol. 6		
55	MASTROTOTARO, J. J. et al.; "Rigid and Flexible Thin-Film Multi-Electrode Arrays for Transmural Cardiac Recording;" March 1992; pp. 271-279; <i>IEEE Trans. Biomed. Engr.</i> ; Vol. 39; No. 3		
56	BUCKLES, D. S. et al.; "Image-Based Display of Activation Patterns Derived from Scattered Electrodes;" <i>IEEE Trans. Biomed. Engr.</i> ; Vol. 42; No. 1; January 1995; pp. 111-115		
57	URBAN, G. A. et al.; "Development of a Multiple Thin-Film Semimicro DC-Probe for Intracerebral Recordings;" October 1990; pp. 913-917 <i>IEEE Trans. Biomed. Eng.</i> ; Vol. 37; No. 10		
58	SMITH, R. W. M. et al.; "A Real-Time Electrical Impedance Tomography System for Clinical Use-Design and Preliminary Results;" February 1995; pp. 133-139; <i>IEEE Trans. Biomed. Eng.</i> ; Vol. 42		
59	SUROWIEC, A. J. et al.; "Dielectric Properties of Breast Carcinoma and the Surrounding Tissues;" April 1988; pp. 257-263; <i>IEEE Trans. Biomed. Eng.</i> ; Vol. 35; No. 4		
60	HEIMBACH, M.; "Measures of Performance;" 1990; pp. 158-174; <i>Electrical Impedance Tomography</i> ; (12.1)		
EXAMINER		DATE CONSIDERED	

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(Use several sheets if necessary)

Docket Number (Optional) 080/03737	Application Number US C ntinuation of 09/995,217
Applicant(s) <b>Andrew L. PEARLMAN</b>	
Filing Date Herewith	Group Art Unit To be assigned

EXAMINER INITIAL	OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
61	DAVIES, R. J. et al.; "detection of the Cancer-Prone Colon, Using Transepithelial Impedance Analysis;" April 1989; pp. 480-484; Arch Surg.; Vol. 124
62	MORIMOTO, T. et al.; "A Study of the Electrical Bio-Impedance of Tumors;" 1993; pp. 25-32; Journal of Investigative Surgery; Vol. 6
63	MAN et al.; "Results of Pre-Clinical Test for Breast Cancer Detection by Dielectric Measurements;" August 12-24, 1979; International Conference of Medical and Biological Engineering, V International Conference of Medical Physics; 30.4; Jerusalem, Israel
64	RIU, P. et al.; "A Broadband System for Multi-frequency Static Imaging in Electrical Impedance Tomography;" 1992; pp. 61-65; Clin. Physiol. Meas.; Vol. 13; Suppl. A
65	RIGAUD, B. et al.; "Experimental Acquisition System for Impedance Tomography with Active Electrode Approach;" November 1, 1993; pp. 593-599; Medical and Biological Engineering and Computing; Vol. 31; No. 6; XP000415771
66	KORTE, C. J.; "Subsurface Electrical Impedance Imaging Using Orthogonal Linear Electrode Arrays;" January 16, 1996; pp. 41-46; IEEE Proceedings: Science, Measurement and Technology; Vol. 143; No. 1; XP006006750
67	ANAH, J. et al.; "Multi-Function Interface Unit for Applied Potential Tomography;" November 1998; pp. 287-298; Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE Cat. No. 88CH2566-8); XP002171794
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